Learning our Way Forwards from the Inside Out

International Perspectives on Innovation in Education

What Makes for a Great School?

Supporting the Journey from Kindergarten to Graduation

A Challenge Dialogue™

Prepared by

Stephen Murgatroyd, J C Couture, Chris Gonnet, Pasi Sahlberg

For discussion, challenge and exchange

December 2010

1. Purpose of the Dialogue

This challenge dialogue is intended as a prelude to and a basis for idea generation for the Alberta: Finland partnership and the meeting of this partnership on 18th-19th March 2010 in Edmonton.

It is also intended to help shape the development of both the Alberta and Finnish school system. In Alberta, following the publication of *Inspiring Education*, *Setting the Direction* and *Inspiring Action on Education,* significant change is about to occur. In Finland, as it looks to its future, changes are also envisaged for the school system – changes aimed at maintaining the success of Finnish schools, especially in terms of equity of access to quality education.

Finland and Alberta are amongst the lead public education jurisdictions in the world with respect to performance on certain indicators[1]. Both jurisdictions seek to continuously improve, and if necessary transform, their school systems so as to provide for high quality education and skills for their citizens. The driver for these decisions is a focus on the socio-economic needs of the respective societies, a commitment to social equity and a desire to provide citizens with the knowledge and skills they require to be effective citizens in a vibrant democracy. The fundamental idea of the partnership is to find a way of learning from each other so that both jurisdictions can continue to demonstrate strong success in their respective school systems.

2. The Key Challenge: Making School Great – One Student at a Time or What Makes for a Great School?

The underlying challenge is to identify the actions needed develop the school systems of Alberta and Finland in such a way as to be improve their effectiveness, efficiency and focus during the coming five years. That is, given that both systems have demonstrated levels of effectiveness and performance, what changes need to be made to:

- Leverage early childhood education
- Sustain effective school performance
- Enhance the level of student engagement and commitment to education
- Tackle some of the issues within the education systems of both Alberta and Finland which are well documented and researched
- Provide a platform for the future development of the educational system which is supportive of public education, professional teachers undertaking mindful teaching and engaged learners

[1] These are the OECD Pisa scores. See http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=82 for more information.

We have chosen to focus this challenge on a simple question: how can system performance be improved through making education more personal and meaningful for each student?

This focus has been chosen since:

1. **It is at the heart of the thinking about the future of education around the world** – almost all major reforms of education in process at this time speak of personalizing education, making learning meaningful and relevant and shifting the curriculum to provide for more choice.
2. **Technology enabled learning** – using digital devices to access knowledge, peer and instructional networks and to co-create new knowledge - enable learning to be more available – many "reformers" speak of learning that is available 24x7 or blended learning (using technology to enable differentiated instruction in the classroom).
3. **Differentiated teaching** – a teacher adjusting their work according to the needs of individual learners or groups of learners – is a form of education which is currently receiving a great deal of attention. The rationale here is that it makes teaching and learning more focused on where an individual or a sub-set of a class of students actually are in their learning journey.
4. **Creating more choice as to how a learner learns and to what they learn** (multiple routes to graduation) seems to be a core strategy in many education change and reform activities at this time.
5. **It is a symbol of a broader rethink of education** – while we do not think that all aspects of change and reform in education underway at this time come from personalizing learning (there are several other drivers), this acts as a powerful symbol of the drivers for change for twenty first century schools.

> Input Request #1
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> Please review the description of this key challenge as outlined above. Is your thinking aligned with this key challenge? What is missing? What is included, but not relevant? What would you change?
>
> Please provide your responses by writing on the feedback area of the web site.

3. An Appropriate Context

The following provide context and some definition for the issues which follow. We offer observations about both Alberta and Finland:

1. **Alberta is a predominantly public school system**. While some Charter and for profit schools operate in Alberta, the majority of K-12 students attend a Public or a publicly funded Catholic School. No plans are in place or being discussed by Government to change the balance of public: charter: private schools.
2. **Finland also has a predominantly public school system**. The founding of a new private comprehensive school requires a political decision by the Council of State. When founded,

private schools are given a state grant comparable to that given to a municipal school of the same size. However, even in private schools, the use of tuition fees is strictly prohibited, and any private school must admit all its pupils on the same basis as the corresponding municipal school. Existing private comprehensive schools are mostly faith-based or Steiner schools.

3. Despite being amongst the leading education systems in the world. It ranks high in the world on key PISA indicators and is leading Canada in the PISA data. Finland is the only jurisdiction in the world to have maintained a significant leadership position in every administration of PISA – it is a nation committed to learning.
4. Despite its success, Alberta has a number of specific challenges. These include, but are not restricted to:
    a. **Alberta has a high level of drop out at high school**. The data on drop outs from high school are very clear - 11.3% of students drop out overall (tied for 2nd overall behind Manitoba), 9.9% in cities (3rd overall behind Manitoba and Quebec), 17% in small towns (1st overall among all provinces) and 21.7% in rural areas (1st overall among all provinces).
    b. **Alberta has the lowest high school to post-secondary transition rate of all provinces**, with only 48% of high school students going to post-secondary education within four years of leaving high school – the national average is 62%.
    c. **Literacy levels amongst those employed in Alberta are problematic** – a 2006 study of the workforce (2.1 million persons) suggests that some 850,00 employees (40% of those employed) have a level of functional literacy below that required for the positions they occupy.
    d. **Poor performance of First Nations and Metis students** - In the past three years, fewer than 15% of grade 9 students in band-operated schools and fewer than 50% of First Nations students in other school systems met the Acceptable Standard in mathematics, science and social studies. So serious are these issues that the Minister, in 2010, intervened in the Northlands School Division because of poor performance. Completion rates for aboriginal students in Alberta's post-secondary system are also low – 42% as compared to 60% for the non-aboriginal students who attend Colleges and Universities in Alberta.
    e. **Significant erosion in support to students with special needs** – 41% of teachers report that, in 2009, services and support for special needs students declined in comparison to previous years[2].
    f. **Student engagement in learning levels are low** – A study by the Metiri Group (US) suggests that, on average, student engagement in their junior and senior high school work is less than 20%, with most behaving as tactically involved (51%), compliant (21%), withdrawn (5%) or defiant (3%). Data for Alberta from a number of Masters and doctoral studies shows this same pattern.
    g. **Teacher turnover remains a concern** – Average teacher turnover in Alberta is 38% over a four year period – just 62% of teachers remain in post four years after they began. Teaching (with the exception of those who teach students with special needs) is no

[2] Source: Alberta Teachers Association (2010) Looking Forward – Emerging Trends and Strategic Possibilities for Enhancing Teaching and Learning in Alberta Schools, 2009-2012. Edmonton, AB at page 9.

longer a "top ten" Canadian job[3]. One third of new teachers express the view that they will leave the profession within five years of starting their first teaching position.

h. **The quality of the education systems physical infrastructure is declining.** Each year the Government of Alberta assesses the fitness for use of Alberta school buildings, rating them on a simple scale from "good" to "poor" – since 2005, the number in the "fair" category has increased (from 25% to 29%) while the number in the "good" category has declined (from 73% to 67%)[4].

i. **Technology adoption levels are modest** – Some 50% of Alberta school teachers use technology regularly and appropriately in their lessons[5], though recent research suggests that getting past this number will require significant investments in professional development and a freeing up of curriculum demands on teachers[6].

j. **Employers are becoming less satisfied with the outcomes of Alberta's investments in education** – In the tri-annual survey of employer satisfaction with the graduates (including apprenticeship graduates) of the post-secondary system, satisfaction declined from 94% in 2005-6 to 88% in 2007-8[7].

5. Finland – one of the world's leading education systems - also has a number of specific challenges. These include, but are not restricted to**:**

   a. **The costs structure of the education system** – there are challenges to Governments concerning costs and financing of the system, given financial constraints in post-recession Finland. This is most often expressed in terms of productivity in the school system. In some cases, productivity gains are sought by reducing schools special education and counselling services or by increasing class size.

   b. **The balance of the school curriculum** – especially as it relates to creativity and physical education – in the light of skills demanded for the economy of Finland.

   c. Linked to the balance of the curriculum is **the balance between school based curriculum development and the role of the Government** as a specifier of curriculum. There is a growing issue in Finland about where the locus of control over the curriculum should lie.

   d. **Adjusting the Finnish education system to the requirements of the EU's competency based qualifications structure**, outlined in the EU's qualifications framework. This also requires broader based skills, especially in vocational education.

   e. **Ensuring social inclusion**. The challenge for Finland is not only to try to maintain high student performance but also strive to keeping Finland an equal society and maintain its leading position as having one of the most equitable education system in the world.

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[3] See http://www.alec.co.uk/free-career-assessment/top-10-most-popular-careers.htm for details. Accessed on June 5th 2010.

[4] Source: Government of Alberta (2009) *Measuring Up – Progress Report on the Government of Alberta Business Plan*

[5] Murgatroyd, S and Couture, J.C (2010) *Using Technology to Support Real Learning First in Alberta Schools*. Edmonton, AB: The Alberta Teachers Association.

[6] Meteri Group and the University of Calgary (2009) *Emerge – One to One Lap Top Learning Initiative – Year One Report*. Edmonton, AB: Government of Alberta, Ministry of Education.

[7] Source: Government of Alberta (2009) *Measuring Up – Progress Report on the Government of Alberta Business Plan*.

f. **Leveraging technology** for effective instruction and increasing the use of technology for problem-solving and project based learning.
g. **Rethinking vocational education and academic education and the mix of the two.** In particular, seeking to find a better balance between vocational content of vocational education and academic requirements – something Alberta also struggles with.

6. In both Alberta and Finland, schools are governed by a governance model that gives emphasis to locally elected bodies having a significant role in governing the school system, under the general direction of the Government. As can be seen from the issues documented above, the balance between the three domains of governance – the Government, the local school jurisdiction and the school itself – is an issue both jurisdictions share, though for different reasons.
7. Underlying both the education systems of Alberta and Finland are real concerns about resources. These include:
    a. Teacher education and professional development – costs, quality and value.
    b. The costs, effectiveness and model for supporting students with special needs.
    c. The costs of and return on investment in educational technology.
    d. The costs and value of administrative reporting and accountability.
    e. The costs and nature of governance.
8. One matter on which there are significant differences between Alberta and Finland is with respect to the recognition and role of professional teachers.
    a. In Finland, teaching is a highly regarded profession for which there is great demand and a long term commitment. In Alberta, teaching is increasingly a transitional profession, with many trained teachers choosing either not to enter the profession or not staying over a long period of time.
    b. In Finland, teachers do not teach as many hours in the day as do Alberta teachers – the extra time is spent on curriculum development and lesson planning and collaborating with other teachers on learning strategies to assist students finding their learning challenging or difficult.
    c. In Finland, teachers have significant levels of control over what they teach and how they teach. In Alberta, the curriculum is highly specified by the Curriculum Branch of the Government of Alberta`s Ministry of Education (select teachers are highly engaged in the development of the curriculum at this jurisdictional level) and have some control over how they teach. In Finland, the Ministry specifies a framework for curriculum, but teachers have significant opportunity to add to the ``what`` and ``how`` of their teaching.
9. Alberta intends to initiate several reforms of education beginning with a new School Act in 2011. These will include:
    a. Changing the school leaving age – raising it from 16 to 17.
    b. Shifting the focus from classroom based learning for a fixed number of hours of instruction per credit to a more flexible form, with students able to work at different paces and not all credit will be classroom based.
    c. Moving to a broader based model of governance within the existing structure of school boards.
    d. Reducing bureaucracy.
    e. Shifting the focus from time in classroom for credit to a competency based framework linked to an understanding of 21st Century Skills: literacy; numeracy; critical thinking and problem solving; creativity and innovation; social responsibility and cultural, global and

environmental awareness; communications; digital literacy; lifelong learning, self-direction and personal management; collaboration and leadership.

Input Request #2 Background Statements

Please review the background statements outlined above. In your view, are there any background statements that need clarification, any missing or any that are not relevant?

Please provide your responses by writing in the feedback area of the web site.

4. Expected Outcomes of this Challenge Dialogue

As a result of this challenge dialogue, it is expected that:

1. Participants will have engaged in a robust, meaningful and informed exchange of ideas and opportunities for change focused on What Makes for a Great High School?.
2. Participants will have identified areas in which there is a strong alignment of views and also areas in which there is significant disagreement.
3. Examples of practice which can inform change and transformation will have been recognized and shared across the Alberta and Finland jurisdictions and within them.
4. A ***What we Heard Document*** will be produced which captures the feedback received and provides the starting point for the conference in March in Edmonton.

Input Request #3 Expected Outcomes

Please review the expected outcomes outlined above. What are your expectations for this Challenge Dialogue? (as in "I would consider this Dialogue a success if…..")

Please provide your responses by writing in the feedback are of the web site.

What follows are areas of key challenge that will lead to changes in the way our education systems operate and to new opportunities for learning our way to a different school system. Whether in Alberta or Finland, there will be opportunities to change and leverage innovation in the service of improved learning opportunities and performance for our students.

The list is partial, but seeks to focus on those challenges most likely to highlight differences between Alberta and Finland as well as differences within each of these jurisdictions.

5. Rethinking Governance

Both Alberta and Finland are rethinking the relationship between three levels of decision making with respect to students and learning: (a) the role of Government as a framer, shaper and decider of matters of curriculum, assessment and standards; (b) the role of the local elected officials (School Trustees in Alberta and Municipal Government in Finland) in managing resources, connecting schools to the community and ensuring stakeholder engagement in strategy and evaluative activities: and (c) the level of autonomy that schools are permitted in hiring teachers, shaping curriculum, assessment, evaluation and strategy. The OECD analysis suggest strongly that getting this balance right is a necessary condition for high performance outcomes[8].

Interestingly, Finland is exploring strengthening the role of the national Government at the very moment when Alberta is looking to lessen the role of Government and increase the degree of independence of school boards and schools.

Alberta is also looking to strengthen the involvement of the community in the governance of their schools. That is, without changing the legal structure of sixty one school boards with locally elected trustees, it wishes to add governance models that encourage a higher degree of local stakeholder engagement – community councils for groups of schools, youth council linked to specific schools and so on.

Here are some assumptions that inform this specific dialogue:

1. Government needs to set direction and provide sufficient guidance in terms of expectations (curriculum frameworks) and standards (suggested outcomes) without being directive to the point of de-professionalizing teachers and trying to run the schools from a bureaucratic base. Finding the balance between "framing and shaping" and "telling and directing" is difficult – few Governments think they have this right.
2. Government also has to provide assurances to the public that the investments made in education are: (a) appropriate (in terms of level and targeting of investment); (b) a efficiently and effectively used; and (c) are producing results which ensure that every student has equitable access to and a chance of success in public education.
3. Local elected officials have the responsibility to build, maintain and support schools in their district which are safe and effective providers of appropriate education are effective in meeting the community's expectations of them and produce results which demonstrate both proficient students and a high degree of equity between schools.
4. Local elected officials also have the responsibility for hiring, developing and supporting teachers and other professional and semi-professional personnel who provide and support education. In Alberta, they are also responsible for pay and conditions.
5. Local direct leaders have responsibility for encouraging and enabling innovation and supporting the development of the "system" of schools locally.

[8] See OECD Pisa study School Factors Related to Quality and Equity (2000) to at http://www.oecd.org/dataoecd/15/20/34668095.pdf accessed October 5th 2010.

6. Parent councils and local community organizations can also provide valuable guidance to schools in terms of strategic priorities, focus and development.
7. Schools are responsible for the providing quality educational opportunities and experiences which engage learners in the work of learning, require learning performance and ensure the development of social and emotional intelligence (character).
8. Schools are responsible for turning curriculum expectations into learning opportunities, evaluating student progress and providing assurance to stakeholders as to quality, efficient and effective use of resources and that they are engaged with the community.
9. Professional teacher and administrator associations have a critical role to play in supporting the professional growth of teachers – ensuring quality entrants to the profession, providing research and supporting services for professional development and provide means of self and peer critical self-reflection.
10. Professional associations also have a key role in encouraging and enabling the development of effective schools, effective teachers and meaningful curriculum.
11. Professional associations also need to represent teachers when they are challenged or threatened by political circumstance or challenged in terms of their professional integrity.

There are other key stakeholders – parents, students and local business, for example – who also play a critical role here. But the challenge relates to the balance of authority and "power" between these three major components of the system.

In Alberta, the talk is of shared governance, by which the Government of Alberta means:

> While traditionally thought of approaches to "ownership" still apply to the system (i.e., teachers are responsible for their classroom, principals are responsible for their school, etc.) realizing a new vision for governance will mean greater commitment to cross-sectoral collaboration between education, health and social agencies as well as not-for-profit organizations. The student voice will be listened to and considered in decision making. *Approaches to governance which are more collaborative, balanced between the provincial government and local school authorities, and which reflect the unique needs of local communities, will be explored*. Building on our current model of elected school boards to strengthen the local democratic process might involve *enhanced governance at the local level through, for example, community or volunteer appointments to ensure balanced Aboriginal representation on a board responsible for a large number of Aboriginal students or which has a tuition agreement with a First Nation (our emphasis).*

Input Request #4 Governance

Please review the assumptions concerning Governance outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your thinking about this issue, what should be done differently? Be specific and, if possible, link to an example now working in practice.

6. Making Learning Meaningful – the "Personalization" of Learning

Another key idea which is informing thinking about the future of school systems is the construct "personalizing education". This could mean a variety of different things:

1. **Curriculum designed uniquely for each learner** – this is more likely customized learning, based on an assessment of the learners needs, learning style and capacities. While some special needs students may experience this form of instruction, it is not at all likely to be widespread and available to all in a public education system
2. **A personal route through curriculum choices linked to interests, career planning and skills** – using course choice to find a pathway to an education which reflects the person making these choices. This is very much the core of the innovation in Finnish High Schools around a decade ago.
3. **1:1 instruction** – ensuring that each learner receives personal instruction for each subject they require instruction in – again, unlikely in a public education system.
4. **Online learning – anytime, anywhere:** this is e-learning and not necessarily personalized. Some school systems are seeing this as a way of personalizing education, especially when the learner can start any course at anytime and call the exam/assessment whenever they are ready to do so.
5. **Work based learning credits + credits from completion of school or non-school courses** = high school diploma (matriculation) – permitting those high school students who also work to receive credit for work-based learning while also earning credits for their school work – making learning connected to the personal choices of individuals.
6. **Challenged based learning credits**…where the learner, at a point of their choosing, challenges a course in terms of assessment and credit – they have learned what they need to be successful.
7. **Changing the pacing of learning** – enabling some learners to "fast track" and some to go at a slower pace – calling an assessment at anytime.
8. **Learning linked to styles** – learning is linked to different learning styles and the same objectives are achieved through a variety of learning routes (a form of differentiated instruction).
9. **Differential supports for learning** – almost all "credited" learning (learning for credit) is currently done by teachers, but there are others in the community with significant knowledge and skill who could make learning possible. Musicians, artists, artesans, craftsmen and women, culinary artists (cooks, chefs) and many more. Why not permit them to offer instruction which is recognized in the learners profile?

The key idea is this: personalized learning means that:

- students progress in programs at a pace that suits their needs and enhances their success.

- students build on individual strengths and achievements, pursue their passions and interests, and learn in ways that are consistent with their individual learning styles.
- barriers to learning are reduced to allow *more flexible hours of instruction and schedules*.
- students have access to *a greater variety of learning experiences that include and extend beyond traditional education settings and benefit from increased community involvement in their learning.*
- multi-disciplinary learning teams comprising teachers, teacher assistants, health professionals, social workers, community members, and parents provide 'wrap-around' supports and services to optimize student success.
- students contribute to diverse learning communities in which the social component of learning and the development and sharing of knowledge is central to their educational experience.
- technology and community-based activities are used to enrich learning experiences and enable students to apply their learning in real-life contexts.
- there is a greater emphasis on assessment *for* learning (i.e., an ongoing exchange of information between students and teachers about student progress toward clearly specified learner outcomes).
- students are lifelong learners who thrive in, and adapt to, a complex and rapidly changing world.

One opportunity is for Alberta to adopt the model of the Finnish high school – shorter learning courses, a high degree of student choice over when they study and with whom and a credit based system as opposed to "grade level" learning. Another is for Finland to look in a serious way at changing its vocational education schools to be more integrated (as vocational education is within Alberta schools).

Some assumptions here:

1. Personalized learning means more option choices for students – more routes to a High School Diploma or matriculation.
2. Personalized learning means more opportunities to pace when study occurs and when assessment occurs – students can call assessment when they are ready to do so (learning no longer is linked to "time served in the classroom" but to outcomes).
3. Personalized learning requires a significant investment in advising and guidance.
4. Learners can study courses with minimum pre-requisites.
5. Learners can gain credit towards their schooling from a variety of sources – e.g. International Baccalaureate, company based training, College or University credit, music certification programs (e.g. Royal Academy of Music).
6. Learners develop an learning portfolio which can be used to gain admission to Universities or Colleges.
7. Students collaborate and have a voice in how, where, when and the rate at which they learn, and are responsible for their choices.
8. All students are empowered to participate in self-reflection and evaluation throughout their education.

Input Request #5 Personalized Learning

Please review the assumptions concerning Personalized Learning outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your thinking, what should be done differently – at the level of the classroom, the school, the District or the school system?

7. Social Inclusion and Inclusive Education

The challenge in both Finland and Alberta is to ensure that there is both equity of access to and equal chances for success in quality education. These two conditions are important. Having access but not being able to succeed is a "revolving door" for failure. The critical condition for success of an education system is that differential resources are applied (for example, to enable aboriginal students in Alberta or the Sami people of Northern Finland, or students in both systems who have been identified with complex needs or learning disabilities) to be successful to the level of their potential in the public school system, recognizing that there are real resource constraints.

Finland performs remarkably well on this aspect of education. The difference in outcome between schools (as measured by PISA) is less than the difference in outcome within schools. In Alberta, this is not the case – some schools are considerably better than others in terms of outcomes – school choice is a real social issue.

The assumption here include these:

- all decisions are made based on the needs and interests of students.
- expectations are high for all students and a number of pathways are used to ensure their success – learning is personalized.
- outcomes in the programs of study are the starting point for planning and instruction for students – process will vary by the individual – it's the outcomes that matter.
- programs of study are complemented with a continuum of supports and services where classrooms, schools, school authorities, and a specialist community are equipped to make it possible for all students to have their needs met.
- programs of study and measures of achievement will continue to be accessible to all students.
- school-based expertise is augmented by current research and new technologies to support teachers.
- teachers have resources and tools to support them in using the programs of study in more robust ways to address the diverse learning needs of all students.
- accessible learning resources are available so that students are provided with learning opportunities that address their interests, strengths and needs.
- students demonstrate their learning in multiple ways, including through refined assessment strategies which measure their progress and growth.
- and principals lead in creating positive learning cultures where all students and staff feel welcomed supported.
- teachers are skilled in collaborating effectively with parents, principals, teacher assistants, psychologists, or other specialists.
- parents are included as important and respected members of their child's learning team.

Alberta has a long way to go to ensure equity of access and success in education. Finland, which has done much to reduce inequities between schools, still has much to do to reduce within school differences in performance and outcome. Social inclusion is a major objective of the UK's education system (in the terms outlined here), but their progress has been problematic for a variety of reasons. Achieving social inclusion is a challenge.

Most especially when it comes to special education. In 2010 The Government of Alberta issued the document *Setting the Direction*, which outlines its approach to special education. This involves a shift from a medical model in which students are categorized by the definition of their "condition" to a model which seeks to identifies capabilities and possibilities. This in turn requires:

1. Collaboration of the deepest kind between parents and providers.
2. Customizing and personalizing curriculum and learning to take full account of the potential and constraints faced by the learner.
3. Create uses of technology to make available learning resources accessible.
4. Significant training and developmental support for teachers.
5. Additional capacities in classrooms to support learning and teaching – the employment of learning coaches.

Social inclusion is a common policy objective in developed countries. Few achieve the ambitions such a policy creates.

Input Request #6 Social Inclusion and Inclusive Education

Please review the assumptions concerning Social Inclusion and Inclusive Education outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your thinking, what should be done differently in schools, district or school systems to enable social inclusion?

Please provide your responses by contributing to the feedback section of the web site.

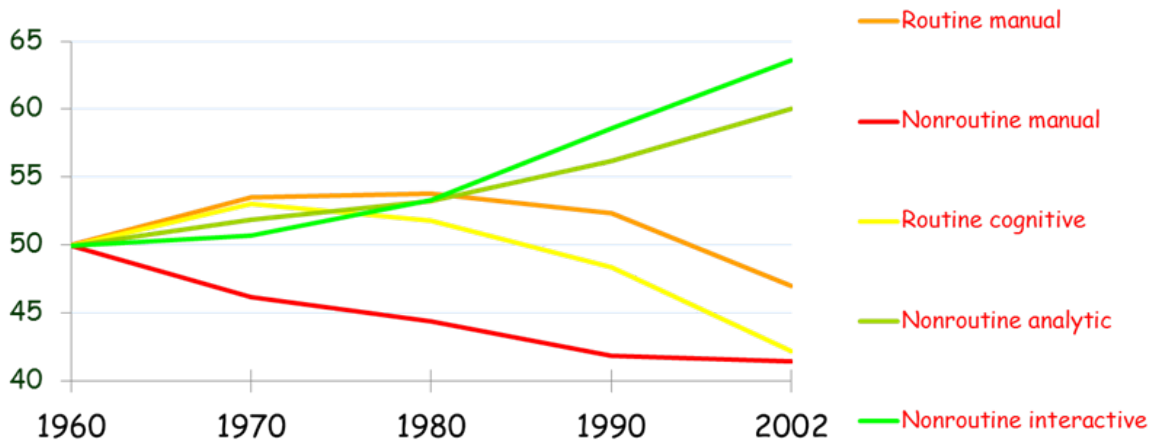
8. A Relevant and Meaningful Curriculum

The Grade 7 curriculum in Alberta has over 1,300 objectives to be taught in 182 days. The equivalent curriculum in Finland has less than half this number of curriculum outcomes to be taught in considerably fewer classroom hours.

A great deal of the curriculum at the high school in Alberta is driven by the requirements of post-secondary educational institutions, especially Colleges and Universities. Yet less than half of the students who attend High Schools in Alberta will transition to Universities and Colleges and many of those who do make this transition will not complete year one of their college or university program (the current estimate is that 15% drop out before the end of year one). The curriculum is being driven by needs

which do not reflect the needs of the majority of those attending school or the majority of those who employ them.

The OECD show, in their decennial studies of skill demands, that the demand for skills has shifted from routine cognitive skills and technical education to a social skills + advanced problem solving/ cognitive skills emphasis[9], as the graph below shows:



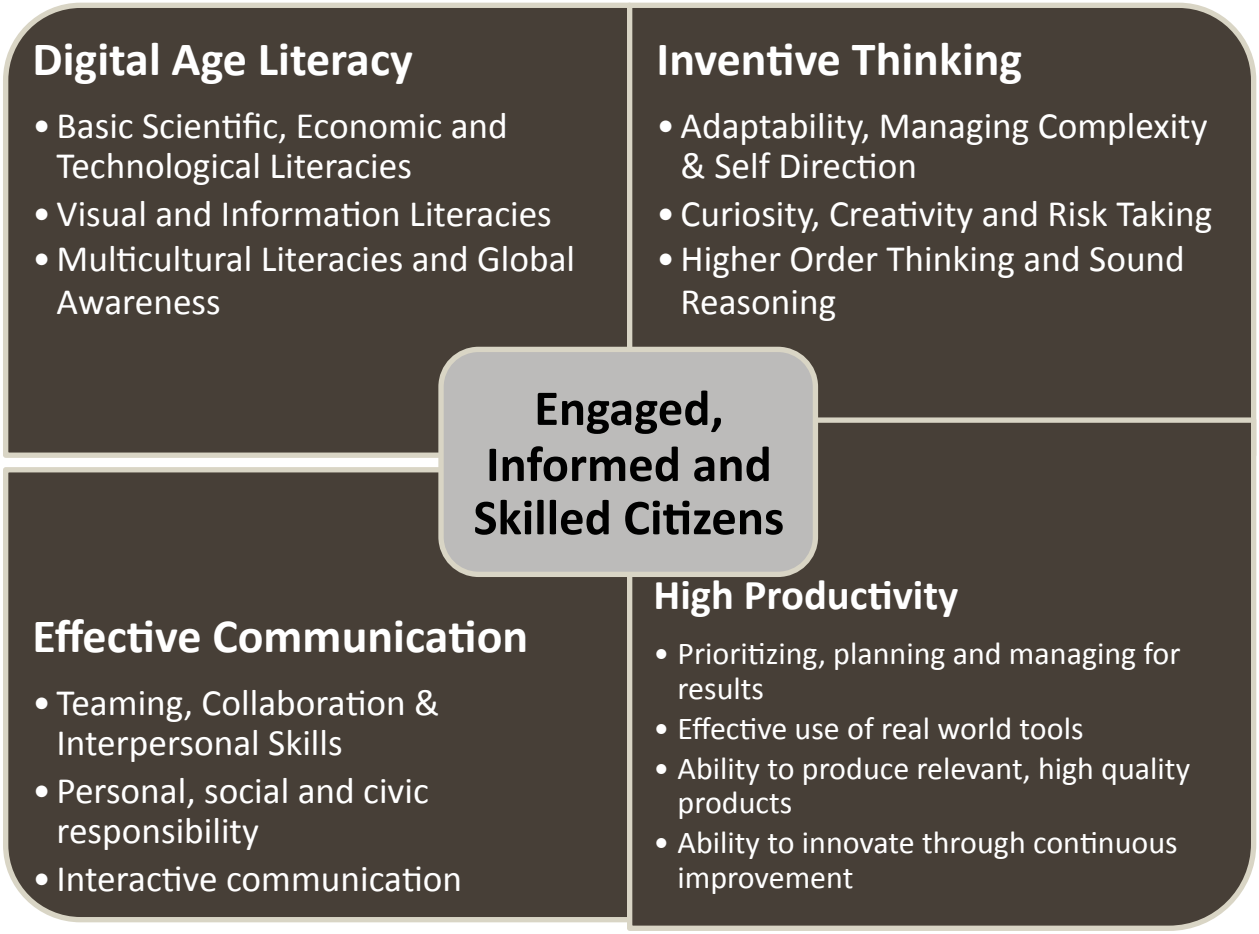
This shift in skills, coupled with the global war for talent, requires jurisdictions to rethink the focus of their curriculum and adopt a different approach to the process of learning. No one is suggesting "throwing the baby out with the bathwater" – history, social studies, sciences, math, technology, arts remain important – but how these are experienced needs to change?

In the general discussion of 21st Century skills, emphasis is given to:

- Critical Thinking and Problem Solving
- Creativity and Innovation
- Social Responsibility and Cultural, Global and Environmental Awareness
- Communication
- Digital Literacy
- Lifelong Learning, Self-Direction and Personal Management
- Collaboration and Leadership

- and we can show the curriculum base in the following way:

[9] See OCED Skills Project reports since 1990. For example, http://www.slideshare.net/OECDPISA/oecd-skills-project-4312560



Yet these so called 21st century skills need to link to more traditional subject matter in the high school – history, mathematics, physics, chemistry, biology, social studies and so on. 21st century skills may not be that different in terms of the knowledge focus from 20th century skills, but how we secure this knowledge and understanding (the pedagogy) may be very different. The emphasis on collaborative team based work, civic responsibility and global activity all suggest a renewed pedagogy.

The assumptions made here include these:

1. At the heart of 21st century skills is the ambition that all students will achieve Level 3 literacy – established as the international standard of literacy for the knowledge economy[10] - as well as digital and mathematical literacy

[10] Description of Adult Literacy Levels

2. There are a variety of routes to ensuring that students leave school with the required skills – there is no "silver bullet" or "right way". Many of these skills can be obtained by the study of science, history, language arts, social studies etc. That is, 21st century skills require access to different ways of knowing and a foundation in a core curriculum.
3. The process of learning is as important as the content of learning. Mindful teaching should be the support for effective learning.
4. Different students need to experience different kinds of teaching – visual learners are different from linear learners who are different again from exploratory learners and so on. Differentiated instruction is not a "nice to have", it is an essential feature of a 21st century classroom.
5. Curriculum is determined by a combination of a central framework (determined by Government) and local interpretation of this framework (determined by professional teachers).
6. Twenty first century skills have a lot in common with twentieth century skills[11] – the focus is on developing capable citizens who have a passion for learning and have skills relevant to their ambitions and intent.

Input Request #7 Rethinking Curriculum

Please review the assumptions concerning Rethinking Curriculum outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your thinking, what should be done differently in schools, districts and school systems?

Please provide your responses by making a contribution to the feedback area related to this section on the website.

9. Appropriate Technology for Learning

Technology can be a significant tool for accelerating and supporting learning, provided that the tool is seen as just that: a support, a resource and an opportunity – not a substitute for relationship driven learning.

In Finland, there have been a number of studies of the opportunities to leverage technology to advance the learning agenda of the nation[12]. The *ICTs at School's Everyday Life* project – supported by the

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Level 5 – Very strong skills able to find information in dense text and make high-level inferences or use specialized background information.

Level 4 – Strong skills able to integrate and synthesize information from complex or lengthy passages.

Level 3 – Adequate skills for coping in a complex advanced society. Equivalent to the skill level required for high school completion and college entry.

Level 2 – Weak skills, can deal with simple clearly laid out material. May be able to cope with everyday demands but will have difficulty with new situations.

Level 1 – Very poor skills, may not be able to determine the correct dosage from the label on a medicine bottle.

[11] See http://www.youtube.com/watch?v=8_ehGLqzBVM

Ministry of Transport and Communications (co-ordinator), Ministry of Education and the Finnish National Board of Education in co-operation with industry and commerce - has the goal of producing new knowledge and know-how for schools and educational administration about the latest developments in ICTs, but more importantly also to develop the educational use of ICT in a multi-dimensional way. The more specific objectives are to improve understanding and practice in relation to:

- ICT tools, infrastructure and usability
- Learning environments and pedagogical models (eg. using social media and mobile learning at school's everyday life)
- Content creation and learning materials
- Development of school communities, support of professional development and collaboration
- Development of public-private partnership models

The results are expected in 2011. Work is underway in twelve Finnish schools and a total of twenty schools are involved in the research consortium.

In Alberta, the Province has spent close to $2 billion on educational technology for schools since 1998. This includes the costs of hardware, software and professional development. While usage continues to grow, there are challenges which were documented in the paper by Murgatroyd and Couture (2010) *Using Technology to Support Real Learning First in Alberta Schools*[13]. Based on a critique of technology adoption and implementation, Murgatroyd and Couture suggest that Alberta needs to:

1. Create a learning consortium to review leading practices and test new practices with respect to renewing and transforming curriculum – identifying the role technology can play in knowledge management and access.
2. Identify ten leading schools that can be lighthouses for innovation, change and transformation and learn our way to integrating technology into learning and teaching.
3. In partnership with the education partners (teachers, school boards, stakeholder organizations), establish priorities for future government investments in digital technologies.
4. Redesign initial teacher education to ensure appropriate skills and understanding of the potential of technology for support of learning and student development.
5. Ensure equity of access to broadband and technology for all students in Alberta.
6. Undertake systematic research studies that identify technology related practices which optimize student learning.

Many claims are made for technology and many vendors are competing for what they see as lucrative markets. More significantly, students see certain technologies (searching, texting, tweeting, social media

[12] See a summary of developments in the paper OECD Study on Digital Learning Resources As Systematic Innovation – Country Case Study Report on Finland available at http://www.oecd.org/dataoecd/47/1/42159200.pdf Accessed on 3rd October 2010.

[13] Available at http://www.teachers.ab.ca/SiteCollectionDocuments/ATA/Publications/Research-Updates/PD-86-17%20Using%20Technology%20to%20Support%20RLF%20in%20Alberta%20Schools.pdf Accessed 6th October 2010.

and music) as utility services, not as optional services. They are increasingly disappointed with the lack of technology integration into the learning process.

Key assumptions here are:

1. Technology is not a substitute for effective person: student based teaching and instruction.
2. Technology can be used to be a source for knowledge and information, provided learners have developed the skills of discrimination and critical thinking – not all information available on line is either reliable or complete.
3. Digital devices – especially mobile devices such as the iPad and Smartphones – can be powerful knowledge access and social networking tools which have great value in project based learning or learning situations which requires the co-creation of knowledge.
4. Textbook replacement with digital media is occurring at a rapid rate. Many of these services permit local content and localization by a registered teacher. This represents a significant opportunity to improve equity of access to quality and affordable learning resources which reflect community concerns and understanding.
5. E-learning (online learning) is a proven method for quality instruction. Many students, especially high school students, find this form of learning as good (and, in some cases and for some students, better) than many classroom learning opportunities for subjects in which they have a high degree of commitment and interest. The evidence is clear that there is ``no significant difference`` between learning outcomes from e-learning versus classroom learning.
6. For technology to be used effectively as part of the process of learning, teachers need support and professional development. Reading the manual is not enough.
7. Twenty first century learning without the use of technology is not something most students can imagine or will find acceptable.
8. Technology changes quickly and schools need to be able to respond flexibly and nimbly to opportunities as they occur.
9. Sharing effective practices is a pre-requisite for system success in terms of technology adoption.
10. Giving technology to schools because someone in Government thinks ``it will be good for them`` is a great way to satisfy the needs of vendors, but is unlikely to lead to improved learning outcomes or enhanced levels of student engagement.
11. The measure of success in terms of technology adoption are: (a) levels of utilization coupled with (b) increases in student engagement and (c) improved learning outcomes. All three conditions need to be met if technology impact is to be assessed.
12. The digital divide is real. Some students do not have access to broadband services and many cannot afford access to the latest technology – if equity is a driving principle, then the digital divide must be addressed.

Input Request #8 Technology and Learning

Please review the assumptions concerning Technology and Learning outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

What really works and what could work if we do things differently? Give examples if you can.

Please provide your response or make a contribution to the feedback page related to this question.

10. Moving from Accountability to Assurance

Governments in a number of OECD countries adopted an approach which tested students at key stages of their schooling so as to hold schools accountable for performance. In Alberta, this has so far involved high stakes testing for all students at Grades 3, 6 and 9 as well as all students remaining in school completing their High School Diploma. In Finland, there is no high stakes testing during the normal period of schooling – students' progress is measured by credit accumulation. However, Finland does have matriculation examinations which provide a bridge between the school and post-secondary education[14]. This examination is described by the National Board of Education of Finland as follows:

> "The examination consists of at least four tests; one of them, the test in the candidate's mother tongue, is compulsory for all candidates. The candidate then chooses three other compulsory tests from among the following four tests: the test in the second national language, a foreign language test, the mathematics test, and one test in the general studies battery of tests (sciences and humanities). The candidate may include, in addition, as part of his or her examination, one or more optional tests. There is a separate assessment system for the matriculation examination. The tests are initially checked and assessed by each upper secondary school's teacher of the subject in question and finally by the Finnish Matriculation Examination Board."

- students often take additional time after completing their high school course requirements to prepare for matriculation. This matriculation process is seen as essential for the selection system for post-secondary places – there is strong competition, for example, for teacher education places and the examination helps identify the most able students. The strategic intent, however, is not to assess the school systems performance (accountability) by means of this examination. That is done through special studies and occasional sample based studies of particular issues.

Finland does, however, take one external assessment very seriously. That is the assessment of the systems performance against others in the OECD using PISA – the Program of International Student Assessment. Finland takes this seriously since, each time the assessment is undertaken (every three years), Finland appears "best in class" amongst all OECD countries. Alberta ranks very high, yet has adopted a completely different framework for accountability than its Finnish counterpart, as Pasi Sahlberg points out in his new book (not yet available).

[14] Universities in Finland accept applicants who have graduated from high school or upper secondary school with an IB (International Baccalaureate), EB (European Baccalaureate) or Reifeprüfung diploma (in any country offering these type of qualifications) or with a Finnish Upper Secondary School Diploma in English.

More recently, a number of jurisdictions which had hitherto engaged in high stakes testing as a measure of system accountability have moved away from this and are adopting a different approach. This is referred to as the transition from an accountability model to an assurance model. Behind this transition are these assumptions:

1. Not all schools have the same history, resources, catchment, intake quality, levels of teacher experience and access to technology. Each school has unique characteristics.
2. Assessing students as if they were equal because of age neglects the significant differences between students of the same age – birth order and month, intelligence and ability, parental support for learning, social supports for the student and so on. All eleven year olds are not all equal at the point of testing.
3. For a school to be accountable for its use of public resources and its work, the school needs to own its work – its strategic intent and purpose, its methods of teaching and its process for evaluating and supporting students.
4. Schools want to be accountable for their work and the performance of their students.
5. Schools can use sampling, teacher evaluation (when teachers are trained and supported to do this expertly) and other measures (peer evaluation, parent evaluation, self-tests) to assess performance and progress.
6. Rather than simply use a single set of measures (scores of Provincial Achievement Tests or Matriculation scores) to determine whether a school is performing, schools should provide a development plan in which it makes clear and explicit commitments for performance and then should report on progress.
7. The primary level of accountability in the school system rests with professional teachers undertaking professional student assessments.
8. School Boards hold schools accountable for living to their commitments and assurances.
9. Where a school is clearly unable to meet the its own commitments and intent, the School Board needs to act to support the school in its plans for change.

Input Request #9 Moving from Accountability to Assurance

Please review the assumptions concerning accountability and assurance outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your thinking, what should be done differently in the classroom, school, district or at the systems level to support a shift from accountability to assurance?

11. Instructional Leadership

A school is more than a place where teachers meet students and teach. It is an organization which has rules, culture, focus and a variety of features which make it unique. No two schools are the same, despite having similar levels of resources and closely similar strategic intentions. Indeed, one of the fascinating aspects of education is how different one school can be from another.

In studies of school effectiveness conducted in the early 1980's to the mid 1990's by such researchers as David Reynolds, Sir Michael Rutter and others, it was clear that schools as organizations can make a difference to student performance. This was the thrust of books like *15,000 Hours* – Secondary Schools and Their Effects on Children (Rutter et al, 1982[15]) and *The Comprehensive Experiment* (Reynolds, Sullivan and Murgatroyd, 1987[16]). The key variables were then said to be: (a) a culture of performance – the schools culture and history made a difference to student outcomes; and (b) leadership within the school by the Principal (or Headteacher) – more commonly referred to as instructional leadership. This difference was significant – said to account for between 8-10% of the difference between high and low performing schools.

Within schools, instructional leadership can make a significant difference. Principals and the leaders within the school at all levels can:

1. Shape the experience of schooling for a generation or more of students.
2. Shape the experience of new teachers as they begin their teaching careers.
3. Shape the experience of teachers at each stage of their professional development.
4. Be an inspiration through their leadership and personality.
5. Be enablers of innovation.
6. Be efficient and effective problem solvers.
7. Be effective at shielding teachers from bureaucracy.
8. Be the voice of the school in the community.
9. Champion the school at each opportunity when resources are available.
10. Make a difference to each student through their interactions with them.

The quality of instructional leadership varies, both by school and by level of experience of leadership. Not all Principals (or Headteachers) are "great", but a great many are. They can make a real difference in a school – especially in terms of how all those associated with it think of it as a place to be.

Our assumptions here are:

[15] Harvard University Press
[16] Taylor & Francis

1. A schools culture – its focus, the alignment of teachers and adults in the school around this focus, its processes and procedures and the way communication occurs in the school – make a difference to learning outcomes.

2. Instructional leadership – developing excellence amongst teachers within the school through careful selection, support and investment in their development – is a critical component of what makes or a good school.

3. Instructional leadership requires Principals (or Headteachers) to focus on teaching and learning and not just be “administrators”. They need to observe teaching, give feedback and be systematically developing best practices.

4. Instructional leadership is tough to do – there are many competing demands on the time of a school based leadership team, but a relentless focus on teaching and learning is likely to produce more gains in student performance than a preoccupation with administrative matters.

5. Instructional leaders themselves require development and support. In some jurisdictions, they require to be qualified as leaders for the work of school leadership.

Input Request #10 Instructional Leadership

Please review the assumptions concerning instructional leadership outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your assumptions and experience, what should be different about the way Principals or Headteachers work? Give examples if you can of what this looks like.

12. Quality Mindful Teaching

The key to a great high school is the quality of teaching learners experience at the school. Great teachers make a great deal of difference – they engage and enable students and enoble learnins as a process. Elizabeth MacDonald and Dennis Shirley speak to this eloquently in their book *The Mindful Teacher*[17]. There they describe the seven synergies of mindful teachers – the practices which make a difference to learners. These are:

1. **Open Mindedness** – mindful teachers engage with their students, parents and community in finding relevant and meaningful opportunities to connect ideas, learning resources, their own and their students interests so as to continuously connect learning to the minds of students.
2. **Loving and Caring** – they demonstrate a genuine care and concern and appropriate affection for their learners and the knowledge they work with.
3. **Professional Expertise** – they demonstrate daily, through their knowledge and processes, their expertise as teachers and as coaches, mentors and guides.
4. **Authentic Alignment** – they are genuinely and warmly engaged and aligned with the work of the school and give meaning to this work for students.
5. **Integrative and Harmonizing** – they enable students and others to make connections, see patterns, think systems and promote an understanding of the connectedness of curriculum.
6. **Collective Responsibility** – rather than relying on high stakes testing, mindul teachers understand that they have a responsibility to evaluate and enable learning and to understand where a learner is in their journey towards mastery of a specific subject. While one teacher may have a "piece" of this puzzle – collectively all who teach a student are better placed than any one individual teacher to "assess" and determine next steps to support the student. Quality teachers not only understand this collective responsibility, but they act accordingly.
7. **Stopping** – quality mindful teachers stop and critically reflect on their wor. They also take time to take care of themselves, not just occasionally, but daily. That is, they work at their own "inner balance" so as to be better able to support students in a mindful way.

In a variety of activities which these authors and others have conducted since the publication of this book in 2009, teachers report that "stopping" and finding balance for themselves is the most difficult of these seven synergies for them to consistently practice.

Our asusmptions here are:

1. There is a strong link between the quality of teaching and student performance.
2. Quality teaching is a function of training and professional development and day to day collective support and instructional leadership within the school.

[17] 2009, Teachers College Press.

3. Contrary to the popular belief that a teacher is “King or Queen” in their classroom, the mindful teacher is most effective when they are part of a collective team working to ensure that learning for students in their school is an engaging and meaningful experience.
4. Schools which develop a collective capacity for quality teachers are more likely to retain these teachers than those who do not do so.
5. Quality teachers create as well as deliver – they use their own knowledge, resources and networks to create meaningful learning experiences which students find engaging and link these to the “required” curriculum.
6. Quality teachers need time to “stop” and find their own balance.

Input Request #12 Quality Mindful Teaching

Please review the assumptions concerning Quality Mindful Teaching outlined above. In your view, do any of these assumptions statements need clarification, any missing or any that are not relevant?

Given your thinking, what should change about teacher preparation, development and support? What else needs to happen to support mindful quality teaching? Can you give examples of changes you have seen which support such developments?

Please provide your responses by providing feedback on the website.

13 What’s Missing ?

We have offered a comprehensice and substantial overview of some of the key components of a response to What Makes a Great High School? But we have missed some things – appropriate physical spaces, equitable access to resources are two that come to mind.

What else have we missed?

What key categories should we identify, document the assumptions for and begin to better understand?

What Finnish features would help Alberta high schools change and improve? What Alberta features would help Finnish schools change and improve?

Input Request #13 What’s Missing?

This is a section where you can indicate:

A key driver that we have not mentioned.

The assumptions you would make about that driver – list them as a numbered list.

The difference this key driver could make to a high school – why would this key driver shift the

14. Conclusion

The idea of a challenge paper is that a set of ideas is laid out so that you can challenge them and improve the quality of all of our thinking by this process. The requests made ask you to indicate what you find needs clarifying, what is missing or what is not relevant. We are not asking you just to agree or disagree – we are seeking to establish a dialogue based on challenge. What tends to happen is that we also identify areas of alignment. For example, if you have nothing to say about a particular set of assumptions, then the working assumption is that you are aligned with these assumptions – they are assumptions you share.

What we need now is your feedback. A web site has been developed, with an opportunity for you to provide commentary on each section of this challenge paper. Go to <insert web site> and provide your feedback, observations, additional information.

What will happen then is this:

1. All feedback received will be reviewed and compiled.
2. A document called *What We Heard* will be sent back showing you the feedback. This will be anonymous – your name will not be used or disclosed. What is important is the idea, issue or comment.
3. Using the *What We Heard* document, the planning team for the conference in March will finalize the agenda around key themes emerging from this dialogue.
4. This same team will also take responsibility for publishing a short book *Rethinking Education – Learning Our Way to Twenty First Century Education* which will provide the backcloth for the conference.

So your input matters. It will help shape the future.